

Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

Please cancel claims 1-12.

13. (New) A method for monitoring the quality of spot welds, particularly for robotic applications comprising the following steps:

welding metal sheets together via spot-welding tools by pressing at least two electrodes opposite each other with said metal sheets being arranged therebetween;

feeding said electrodes with power to create a welding spot;

inserting a strip between said electrodes and said metal sheets wherein said strip is conveyed past said electrodes and said metal sheets during said step of welding metal sheets together, and wherein said strip is configured so that it forms an image representing the welding spot, wherein said image formed

on said strip is detected and evaluated by an evaluation means;

assessing said welding spot via said evaluation means via optical visualization;

determining the size, shape position of the welding spot from said image using said evaluation means.

14. (New) The method as in claim 13, further comprising the step of tuning the material of the strip to the materials of the metal sheets to be welded so that the temperature occurring during welding produces an image which is formed on account of a detectable change in a condition.

15. (New) The method as in claim 13, wherein said step of welding said metal sheets comprises welding aluminum sheets using a strip having a tin coating.

16. (New) The method as in claim 13, wherein said step of welding metal sheets comprises welding zinc coated sheets using a strip having a coating of copper.

17. (New) The method as in claim 13, further comprising the step of applying a coat of laquer on the strip wherein said laquer evaporates at a temperature generated by a welding process forming a mirror inverted proportional image.

18. (New) The method as in claim 13, wherein said step of evaluating said strip occurs at each welding spot.

19. (New) The method as in claim 13, wherein said step of evaluating includes determining the size of the welding spot by taking an optical picture of said image on said strip using a camera and then measuring said image on said strip taken by the camera.

20. (New) The method as in claim 13, wherein said step of evaluation comprises determining a size, shape and position of a welding spot using a digital signal that is emitted by said evaluation means, wherein said digital signal is then evaluated to determine the size, shape and position of the welding spot.

21. (New) The method as in claim 13, further comprising the step of multiplying the dimensions of said image by a factor of

the deposited weld to determine the actual dimensions of the welding spot.

22. (New) The method as in claim 13, further comprising the step of comparing said image on said strip with the deposited reference weld to evaluate the welding point.

23. (New) The method as in claim 13, further comprising the step of recording the determined dimensions of the welding spot in a database.

24. (New) The method as in claim 13, further comprising the steps of removing the strip from said spot welding apparatus, and evaluating in a separate evaluation unit said strip at an end of the welding process.

25. (New) The process as in claim 14, wherein said step of tuning the material of the strip includes tuning the material of the strip to create a detectable color change.

26. (New) The process as in claim 14, wherein said step of tuning the material of the strip includes tuning the material of

the strip to create a detectable change in a reaction of an aggregation state of a strip.

27. (New) The process as in claim 14, wherein said step of tuning the material of the strip includes tuning the material of the strip to create a detectable change in the coating applied on the strip.

28. (New) The method as in claim 13, wherein said step of evaluating includes determining the shape of the welding spot by taking an optical picture of said image on said strip using a camera and then measuring said image on said strip taken by the camera.

29. (New) The method as in claim 13, wherein said step of evaluating includes determining the position of the welding spot by taking an optical picture of said image on said strip using a camera and then measuring said image on said strip taken by the camera.

30. (New) The method as in claim 13, wherein said step of evaluating includes determining the size, shape and position of

the welding spot by taking an optical picture of said image on said strip using a camera and then measuring said image on said strip taken by the camera.